
EHRs Detect Undiagnosed Type 2 Diabetes



A group of UCLA researchers that mined thousands of electronic health records (EHRs) with the aim of finding a cheaper and more accurate way of identifying people with Type 2 diabetes discovered more than they expected.

As well as developing a screening algorithm that could increase the number of correct Type 2 diabetes diagnoses of the disease by narrowing down the pool of candidates put forward for screening, they also unrevealed previously unknown risk factors for diabetes. These included a history of sexual and gender identity disorders, intestinal infections and illnesses that includes such sexually transmitted diseases as chlamydia.

"With widespread implementation, these discoveries have the potential to dramatically decrease the number of undetected cases of Type 2 diabetes, prevent complications from the disease and save lives," said Ariana Anderson, the study's lead author and an assistant research professor and statistician at UCLA's Semel Institute for Neuroscience and Human Behavior.

Anderson led a team that examined electronic records for 9,948 people from hospitals, clinics and doctors' offices across the U.S.. The records included vital signs, prescription medications and reported ailments.

The researchers used half of the records to make an algorithm that allowed prediction of the likelihood of somebody having diabetes. They then tested this pre-screening tool on the remaining half.

The discovery was that having any diagnosis of sexual and gender identity disorders increased the risk for Type 2 diabetes by about 130 percent. This is equal to high blood pressure, a leading risk factor.

Additional health conditions were also significant risk factors for the disease. These included viral infections and chlamydia (which increase diabetes risk by 82 percent) and intestinal infections such as colitis, enteritis and gastroenteritis (88 percent increase).

"Given that 1 in 4 people with diabetes don't know they have the disease," Anderson said, "it's very important to be able to say, 'This person has all these other diagnoses, so we're a little bit more confident that she is likely to have diabetes. We need to be sure to give her the formal laboratory test, even if she's asymptomatic.'"

Mining big data for ways to improve medical care has become a nation-wide trend following the 2009 economic stimulus package, which included incentives for digitising medical records.

If untreated, diabetes can lead to blindness or problems with the feet and legs that trigger the need for amputation. Current ways of screening for the disease are generally accurate but also costly.

Source: [Eureka Alert](#)

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